

MATH 494: Invitation to Functional Analysis and Measure Theory
Syllabus for the Spring 2020, Section 001

Instructor: Dr. Flavia Colonna

Office: Exploratory Hall, Room 4215

E-mail and home page: To get in touch with me outside of class or during the office hours is by contacting by email at fcolonna@gmu.edu.

Office hours: TR 1:20 p.m.-2:50 p.m. and by appointment.

Textbook: J. Shapiro, *Volterra Adventures*, Student Mathematical Library, Vol. 85, American Mathematical Society, 2018. In addition, copies of material covering measure theory will be provided by me.

Material to be covered: A selection of the material from the textbook, focusing on the elements of functional analysis of Volterra operators, plus measure theory on the real line and preliminary exposure to Lebesgue integration.

Exams: There will be two take-home midterms due Thursday **Feb. 20** and Tuesday **Apr. 21**, and a take-home final exam assigned the last day of classes and due on Thursday **May 7**.

Homework: There will be six homework assignments in the course of the semester. The lowest homework grade will be dropped.

Attendance: Each student is expected to come to class regularly. I will keep records of students' attendance and use these and class participation to decide grades at the end of the course.

Percent of final grade:

- Midterm Tests: 40%
- Homework: 30%
- Attendance & class participation: 5%
- Final exam: 25%

Final remark: Collaboration and study groups are encouraged but all work submitted for a grade must be done independently.